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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,704

09/09/2005

James Bruce Franklin

CU-4189 BWH

7846

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EXAMINER

KOSLOW, CAROL M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

07/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,704	Applicant(s) FRANKLIN ET AL.	
	Examiner C. Melissa Koslow	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-55 and 57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-55 and 57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/13/08</u> . | 6) <input type="checkbox"/> Other: _____ |

This action is in response to applicants' amendment of 13 May 2008. The amendments to the claims have overcome the art rejections and the 35 USC 112, second paragraph rejections and the 35 USC 112 first paragraph rejections over canceled claims 25-31 and 36-42.

Applicant's arguments with respect to the 35 USC 112, first paragraph rejection over claims 46-55 have been fully considered. In view of these arguments and the amendments to the specification, 35 USC 112, first paragraph rejection over claims 46-55 is withdrawn. However, upon further consideration, a new grounds of rejection is made in view of the article by Swift et al.

The Examiner gave the incorrect year for the effective filing date for remaining claims 46-55. The year should have been 2002, not 2005. Thus these claims, and new claim 57, is 5 November 2002.

Claim 57 is objected to because of the following informalities: The formula is illegible. Appropriate correction is required.

Claim 49 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This claim teaches the wavelength range in which attenuation is taken in account is beyond the main emission range. Page 5, lines 8-11 of the specification teach the wavelength range in which attenuation is taken in account is beyond the maximum emission intensity wavelength. This discrepancy needs to be corrected.

Claims 49 and 57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 46 teaches the attenuation is that the emitted light will suffer owing to re-absorption in the main emission wavelength range. Claim 49 teaches the wavelength range in which attenuation is taken in account is beyond the main emission range. The range in claim 49 is broader than that of claim 46 and it is unclear how absorbed wavelengths which are outside the main emission range will affect the attenuation of the emitted light. Thus claim 49 is indefinite.

Claim 57 is indefinite since it is unclear what is the values of the maximum and minimum wavelength used in the formula. While the specification states F is calculated over all wavelength, it is unclear what wavelength are make up the mentions "all wavelengths", the visible wavelength range, the wavelength range made up of both the wavelength range absorbed by the dye and the wavelength range emitted by the dye or just the wavelength range emitted by the dye. The specification is not clear as to which is the wavelength over which the light output is measured.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 46-48, 45 and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by the article by Swift et al.

This articles teaches a method for fabricating a light collectors which is doped with fluorescent dye molecules where the collectors are fabricated where the fabrication process includes calculating the concentration of the dye molecules taking into account the attenuation

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that the emitted light will suffer owing to re-absorption or scattering the main emission wavelength range thereby taking into account that the fluorescent light output is reduced for dye concentrations above an optimal value. In addition the reflection properties of the medium that will be adjacent to the light collectors is also taken into account when calculating the dye concentration. The articles also teaches selecting dimension and calculating the dye concentration for the selected dimensions. The article teaches that the calculated dye concentration is that which provided optimal combined absorption and emission efficiency is obtained. One of the three dyes used in the taught process is Lumogen 300, which has a peak of about 613 nm and a wavelength range of about 575-625 nm, which falls within the range of claim 54.

The articles teaches the claimed process.

Claims 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article by Swift et al.

As stated above, the articles teaches the claimed method. The articles teaches the concentration of the dye molecules taking into account the attenuation that the emitted light will suffer owing to re-absorption of emitted light, which includes wavelengths beyond the maximum emission intensity wavelength or peak. Two of three dyes used in the taught process are Lumogen 083, which has a peak of about 490 nm and a wavelength range of 450-600 nm; and Lumogen 570, which has a peak of about 414 nm and a wavelength range of 350-525 nm. These emission ranges overlap ranges of claim 51-53 and includes wavelength which are 50 nm longer than the emission intensity wavelength.

Claim 57 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

There is no teaching or suggestion in the cited art of record to use the claimed formula to calculate the fluorescent light output in the known process of claim 46. While the article teaches the claimed process of claim 46, the articles does not teach that the claimed formula is that used to calculate the taught fluorescent light output ranges and applicants has admitted that the claimed formula is not the only formula that can be used to calculate the light output of claim 46.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
July 16, 2008

/C. Melissa Koslow/
Primary Examiner
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